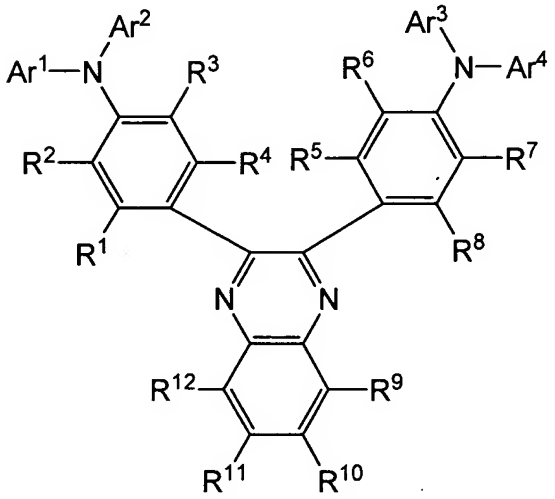
CLAIMS

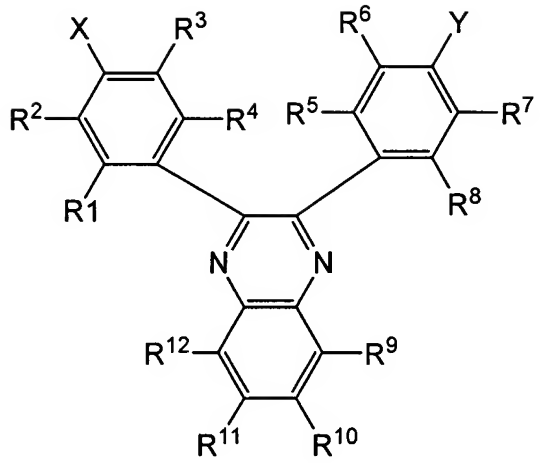
1. A quinoxaline derivative represented by a general formula (1).



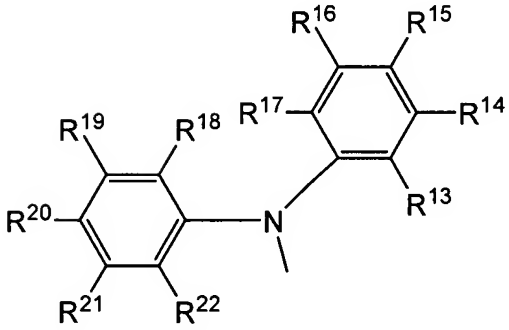
(1)

(In the formula, R^1 - R^{12} each independently represents a hydrogen atom, a halogen atom, a lower alkyl group, an alkoxy group, an acyl group, a nitro group, a cyano group, an amino group, a dialkylamino group, a diarylamino group, a vinyl group, an aryl group, or a heterocyclic residue group; R^9 and R^{10}, R^{10} and R^{11}, and R^{11} and R^{12} are each independent or mutually bonded to form an aromatic ring; Ar^1 - Ar^4 each independently represents an aryl group or a heterocyclic residue group; Ar^1, Ar^2, Ar^3 and Ar^4 are each independent or Ar^1 and Ar^2, and Ar^3 and Ar^4 are respectively mutually bonded directly, or Ar^1 and Ar^2, and Ar^3 and Ar^4 are bonded via oxygen (O), sulfur (S) or a carbonyl group.)

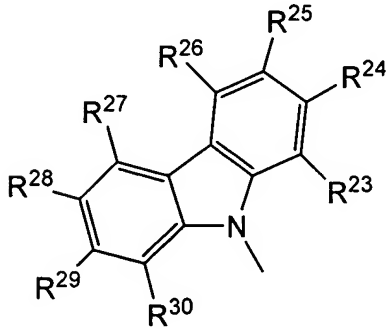
2. A quinoxaline derivative represented by a general formula (2).


X
R3
R6
Y
R2
R4
R5
R7
R1
R8
N
N
R12
R9
R11
R10

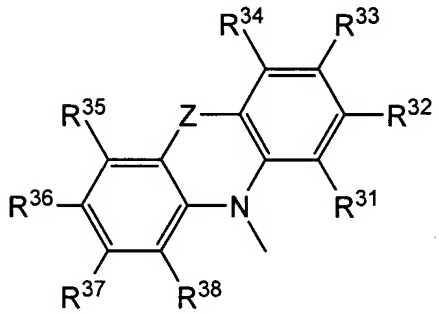
(2)


R16
R15
R17
R14
R19
R18
R20
N
R13
R21
R22

(3)


R25
R26
R24
R27
R28
R23
N
R29
R30

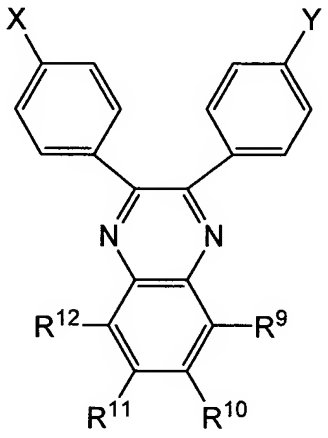
(4)


R34
R33
R35
Z
R32
R36
N
R31
R37
R38

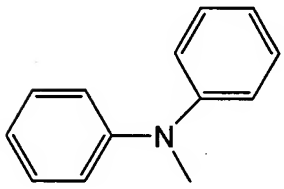
(5)

(In the formula, X and Y each independently represents any of general formulas (3) - (5); R^1 - R^{38} independently represents a hydrogen atom, a halogen atom, a lower alkyl group, an alkoxy group, an acyl group, a nitro group, a cyano group, an amino group, a dialkylamino group, a diarylamino group, a vinyl group, an aryl group, or a heterocyclic residue group; R^9 and R^{10}, R^{10} and R^{11}, and R^{11} and R^{12} are each independent or are mutually bonded to form an aromatic ring; Z represents oxygen (O), sulfur (S) or a carbonyl group.)

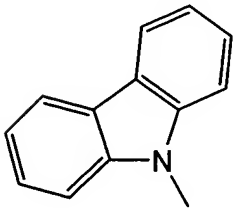
3. A quinoxaline derivative represented by a general formula (6).



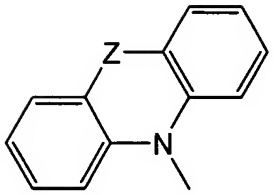
(6)



(7)



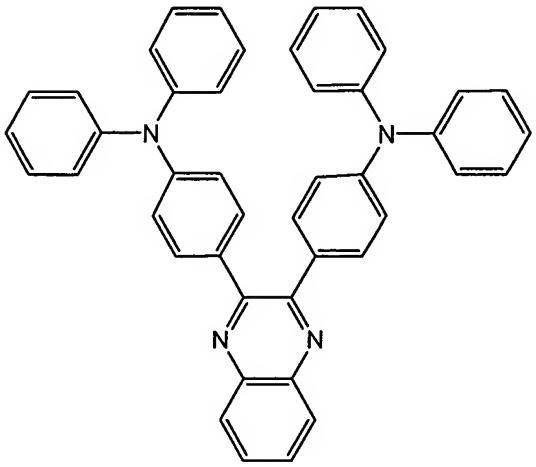
(8)



(9)

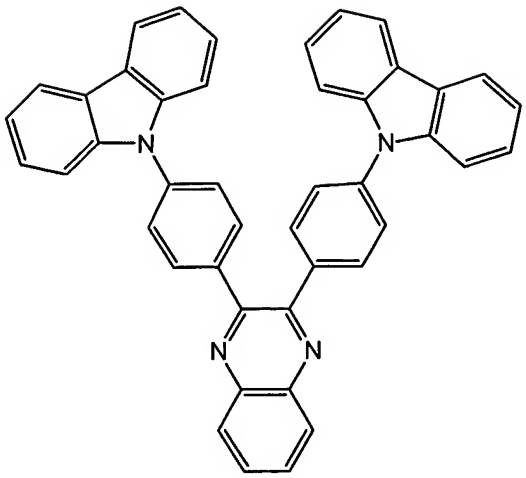
(In the formula, X and Y each is represented by either one of formulas (7) - (8); in the formula, R^9 - R^{12} independently represents a hydrogen atom, a halogen atom, a lower alkyl group, an alkoxy group, an acyl group, a nitro group, a cyano group, an amino group, a dialkylamino group, a diarylamino group, a vinyl group, an aryl group, or a heterocyclic residue group; R^9 and R^{10}, R^{10} and R^{11}, and R^{11} and R^{12} are each independent or mutually bonded to form an aromatic ring; Z represents oxygen (O), sulfur (S) or a carbonyl group.)

4. A quinoxaline derivative represented by a structural formula (10).



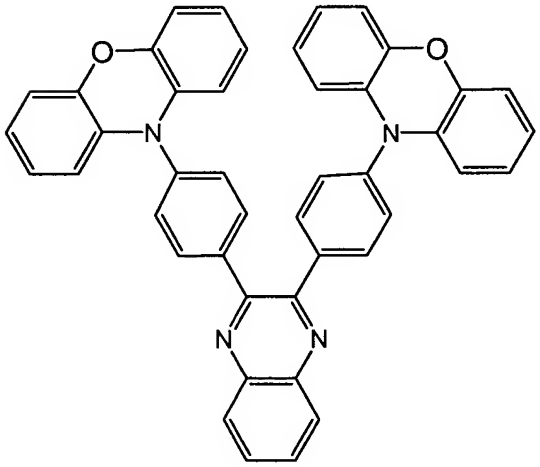
(10)

5. A quinoxaline derivative represented by a structural formula (11).



(11)

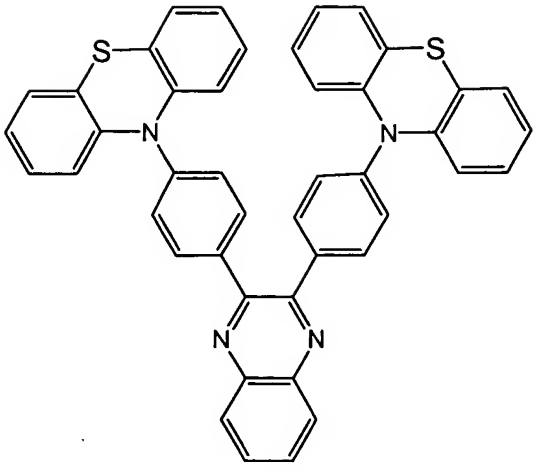
6. A quinoxaline derivative represented by a structural formula (12).



(12)

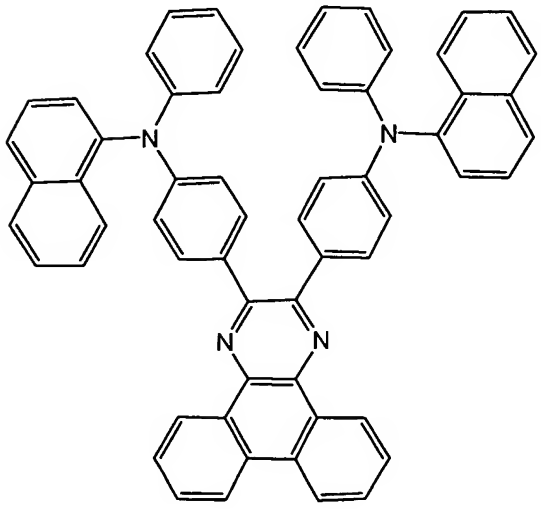
5

7. A quinoxaline derivative represented by a structural formula (13).



(13)

8. A quinoxaline derivative represented by a structural formula (14).



(14)

9. An electric field light emitting device characterized by including said quinoxaline derivative according to any one of claims 1 to 8, between a pair of electrodes.

10. An electric field light emitting device characterized by including a light emitting layer containing said quinoxaline derivative according to any one of claims 1

to 8 between a pair of electrodes, and a phosphorescent material showing a light emission from a triplet excited state.

11. An electric field light emitting device according to claim 8, characterized in that a light emission spectrum of said phosphorescent material in claim 10 has a peak from 560 to 700 nm.

12. A host material including said quinoxaline derivative according to any one of claims 1 to 8.

13. An organic semiconductor device characterized in that said quinoxaline derivative according to any one of claims 1 to 8 is included in an active layer.

14. An electronic device characterized by employing said electric field light emitting device according to claim 10.

15. An electronic device according to claim 14, characterized in that said electronic device is any one of a personal computer, a portable telephone and a television receiver.

16. An electronic device characterized by employing said organic semiconductor device according to claim 13.

17. An electronic device according to claim 16, characterized in that said electronic device is any one of a personal computer, a portable telephone and a

television receiver.